

IN SITU REDUCTION OF COPPER OXIDE PRIOR TO SILICON CARBIDE DEPOSITION

Abstract of the Disclosure

5 The invention relates generally to improved silicon carbide deposition during
dual damascene processing. In one aspect of the invention, copper oxide present on a
substrate is reduced at least partially to copper prior to deposition of a silicon carbide or
silicon oxycarbide layer thereon. In the preferred embodiment the reduction is
accomplished by contacting the substrate with one or more organic reducing agents.
10 The reduction process may be carried out in situ, in the same reaction chamber as
subsequent processing steps. Alternatively, it may be carried out in a module of a
cluster tool.

15

20

W:\DOCS\ANM\ANM-2100.DOC
091001

091001 091001 091001